

REMARKS

In the Office Action the Examiner noted that claims 1, 6 and 22-37 were pending in the application. The Examiner allowed claims 1, 6, 22-33 and 35-37. The Examiner rejected claim 34. By this amendment, various claims have been amended. Thus, claims, 1, 6 and 22-37 remain pending in the application. The Examiner's rejections are traversed below.

Objection to Claim 6

In item 1 on page 2 of the Office Action the Examiner objected to claim 6. Applicants have amended claim 6 to reflect the appropriate underlining and bracketing for that claim.

In addition, upon further review of this claim and certain other claims, the applicants have determined that the claimed relationship recited for the terminals of the bandpass filter with respect to the SAW filters is inappropriate. In particular, claims 1, 6, 25, 29, 30 and 34 have been amended accordingly. To illustrate the change, applicants note that claim 1 reads on, for example, Figure 74. Claim 1 recites "a pair of SAW filters" (see F1 and F2 in FIG. 74. In the embodiment of Figure 74, assuming SAW filter F1 is a receiver SAW filter and SAW filter F2 is a transmitter SAW filter, the input terminal of F1 is on the To (antenna) side, while the input terminal of F2 is on the T2 (system) side.

Claim 1 of the original patent specifies that both input terminals are commonly connected to the respective pairs of output terminals of the pair of SAW filters. However, as illustrated above, this is inappropriate. Similarly, the recitation with respect to the output terminals is also inappropriate. The same situation also occurs in claims 6, 25, 29, 30 and 34. Accordingly, these claims have been amended so that the formerly recited "input terminals" are now -- common signal terminals-- and the "output terminals" are now recited as --signal terminals-- to be consistent with column 25, lines 51-55 of U.S. Patent 5,559,481. In addition, these claims have been modified to appropriately recite the connection of the bandpass filter common signal terminals to the SAW filters. Accordingly, it is respectfully requested that these amendments be entered.

The Prior Art Rejection

In item 4 on pages 2 and 3 of the Office Action the Examiner rejected claim 34 under 35 U.S.C. § 102 as anticipated by European Published Patent Application 0422637 to Tabuchi. The Examiner takes the position that Figures 2A, 8 and 9 of Tabuchi et al. disclose the features of claim 34.

Referring to Figure 9 and column 10, lines 33-35 of Tabuchi et al., it is stated that Figure 9 is a diagram of a usual combined resonator filter having all resonators formed on a single piezoelectric substrate 67. Tabuchi explains that the conventional SAW filter or duplexer illustrated in Figures 8 and 9 has characteristic problems that are described from column 1, line 51 to column 2, line 25. In order to solve these problems, Tabuchi adopts an approach of using multiple substrates having different electro-mechanical coupling coefficients as described in column 3, lines 9-13 and column 9, lines 33-37 and 52-55. Further explanation is provided from column 11, line 50 to column 12, line 32. Thus, Tabuchi teaches that the filters forming the duplexer of Figure 2A should be mounted on multiple substrates having different electromechanical coupling coefficients. Thus, Tabuchi et al. teaches away from forming the SAW filters of Figure 2A on a single substrate. Specifically, Tabuchi teaches that the transmitter and receiver SAW filters should be on different substrates having different electro-mechanical coupling coefficients.

To clarify the differences between claim 34 and the prior art, claim 34 has been amended to recited:

“a pair of SAW filters, each having respective pass bands, a pair of input terminals, a pair of output terminals and at least one of the pair of SAW filters comprising a plurality of SAW resonators connected in a multiple ladder structure formed by series arms and parallel arms on a single piezoelectric substrate;”

It is submitted that none of the prior art teaches or suggest a band-pass filter having the above-identified features. Therefore, it is submitted that claim 34 patentably distinguishes over the prior art.

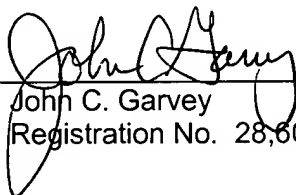
Summary

It is submitted that none of the references, either taken alone or in combination, teach the present claimed invention. Thus, claims 1, 6 and 22-37 patentably distinguish over the prior art. Reconsideration of the claims and an early notice of allowance are earnestly solicited.

Respectfully submitted,

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